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### Consumers, the Legal System and Product Liability Reform: A Comparative Perspective Between Japan and the United States

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CONSUMERS, THE LEGAL SYSTEM AND  
PRODUCT LIABILITY REFORM:  
A COMPARATIVE PERSPECTIVE  
BETWEEN JAPAN AND THE UNITED STATES

Koichi Hamada

Yale University

March 1996

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**Consumers, the Legal System and Product Liability Reform:  
A Comparative Perspective between Japan and the United States**

**ABSTRACT**

A new Product Liability (PL) Act in Japan became effective in July, 1995. In the United States, congress passed, subject to the endorsement of the president, the legislation that limits the ceiling of compensations and punitive damages in PL cases. Thus, there seems to be a converging tendency between the Japanese system, which has relative emphasis on industrial interests and encouraged off-court settlements, and the U.S. system, which has relatively emphasized consumers' interest and encouraged litigation. A large difference exists between the United States and Japan, particularly in the number of suits about product liability. For example, within a half year after the enforcement of the new PL Act, only a *single* case was brought to court in Japan.

This paper explains the legal content, the social background and the legislation process of the new PL Act in Japan. Using economic analysis, it clarifies the question of what the consequences are with the difference in legal systems on resource allocation in the two countries.

**KEY WORDS:** Product Liability, U.S.-Japan Legal Comparison, Law and Economics

March 1996

**Consumers, the Legal System and Product Liability Reform:  
A Comparative Perspective between Japan and the United States**

Koichi Hamada\*

**1. Introduction**

On June 22nd, 1994, in the midst of the political turmoil that gave birth to the first cabinet to be headed by the Socialist Party in many years, the Product Liability Act (PL Act) passed Japan's Diet. The law became effective on July 1st, 1995. This was the first time a special law to safeguard consumers against hazardous products had been enacted in Japan. This enactment was realized after more than twenty years of serious struggles among related parties, struggles that began when an advisory council in the Economic Planning Agency proposed the legislation of a Product Liability Law.

Understandably, producers in the industrial sectors strongly opposed legislation of the PL Act. Until 1995, legal cases concerning defective products were handled by the application of traditional civil law, in particular Article 709 on torts. Firms were afraid that the "liability crisis" or the "litigation explosion" in the United States might be imported to Japan. At the same time, in almost all developed

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and developing countries and post socialist countries, including China, no-fault product liabilities were being introduced. Accordingly, Japan had begun to appear to be anachronistic in the field of product liability. The export expansion of Japanese goods that were produced under an easier PL standard could have been regarded by trade partners as social dumping. The new PL Act remedied this embarrassment or, at least, eased the situation.

It is too early to assess the total impact of this epoch-making legislation. As far as I know, however, there has been only a single court action related to the PL Act up to the present. In spite of the increased protection of consumers under the PL Act and all the media attention, the Japanese public has yet to change its attitudes toward defective products and, particularly, toward legal actions associated with them.

The legislation of the PL Act was an important legal reform. It was also an economic reform since the study of product liability is one of the few areas in which law and economics interact very closely. This paper studies the economic implications of the new PL Act from a comparative perspective.

The differences in existing PL laws, as well as the differences in their practical applications, in Japan and the United States indicate the characteristics of the two market economies and the societies. One observes the contrast

between a close-knit consensus-building society and an individualistic, litigious society. Japan puts priority on the relatively harmonious coordination of economic activities even at the risk of neglecting consumer interests. The United States emphasizes competitive and innovative activities. It puts priority on the protection of individual rights by due process, even though that is costly.

A comparison of the substance of PL laws cannot be done properly without discussing differences in procedural law (Kobayashi, 1992). Thus, when I describe the impact of the introduction of the PL Act in Japan in a comparative perspective, I will also pay attention to the difference in procedures. This is the first point to be emphasized in this paper.

The comparative effects of different PL laws and procedures, say the Japanese and the American, present an interesting question that can be answered by modern economic analysis. What affects the economic outcome of the product liability system is not only the strength of consumer protection in the substantive law but also the existence or non-existence of the contingent fee combined with the jury system.

The legislation and application of PL laws has international implications in a world in which countries interact by trade, direct investment, and capital flows. The presence of rigorous PL law in the United States is probably

working to make Japanese exporters more cautious, even though they are accustomed to being shielded by the relative lack of PL suits from Japanese consumers at home. On the other hand, recent moves by the U.S. Congress seem to indicate that sentiment in favor of moving the extreme American PL system toward more reasonable ways of preventing defective products without cumulative legal costs.

In this paper I give a short overview of the legal-economic situation in Japan after the legislation of the PL Act in a comparative perspective with respect to the United States. Then I consider whether modern economic theory can give guidelines to evaluate and improve the present situations.

In Section 2, I describe the basic features of the PL Act. Then in Section 3, I trace the responses of the actors in the Japanese scene: consumers, producers, insurance companies, lawyers, and the government. In Section 4, I analyze the economic implications of Japan's PL system by comparing them with the functioning of the more litigious U.S. system. Finally, in the last section I briefly mention the role of the PL system in the integrated world economy.

## **2. Features of the New Product Liability Act**

The new Product Liability Act (Seizobutsu Sekinin Ho) passed the diet after a long tug-of-war period between consumers and lawyers on the one hand and producers on the

other. According to the new Act (PL act), the existence of a defect, the occurrence of damages, and the causality between the defect and the damages should be proven by the plaintiff. However, once the plaintiff proves these three factors, the existence of negligence and the causality between the negligence and the defect need not be proved by the plaintiff.

In the process of legislating the PL Act, it was discussed whether the definition of a product should include non-tangibles such as computer software. The new PL Act limits the project to tangible objects.

The PL Act allows the defendant to use a defense of "inevitable risks of technology development." Firms can make a plea insisting that, to the best of their scientific knowledge, they could not have known that they had produced a defective product. To encourage development of technology, medication and medical equipment, and to promote entrepreneurship of firms, proponents of this defense argued that the risks they cannot foresee at the time of development should be excused from product liabilities. Others who were opposed to this clause felt that it just gave firms more reasons to fight against plaintiffs, including those who were seriously injured or killed.

In the absence of externalities with respect to knowledge and inventions, there is little reason from an economic standpoint to allow for this defense of development risks. However, as long as there are externalities in knowledge and



invention, as I believe is true, this clause can be justified at least in part by economic reasons.

There has been an active debate about whether or not the presumption of the existence of defect, and the presumption of the causality between defects and damages on the part of victims should be incorporated in the new Act. It is argued that the detailed data, for example, of chemical, clinical, animal, and other experiments, are kept by the producers. Thus, by virtue of difficulty in obtaining data, the plaintiff has difficulty in proving the existence of a defect and the causality between the defect and the damage.

I consider, however, that for many products consumers or users have better access to the relevant evidence. Some accidents take place because of the misuse of machinery, cosmetics, and so forth, and the person who can most easily provide evidence to the court is the person who is near the commodity at the time of the accident (i.e., the consumer, the user, or the victim). In this sense, the general approach of the PL Act may be sound. However, for some specific products such as pharmaceutical products, producers accumulate most of the crucial evidence regarding such things as defective medication that could cause health hazards. Without those physical, chemical, biological, experimental, and epidemiological data, the plaintiff would be in a difficult position to prove the defect and the causality between the defect and the damage.

Kato (1994) proposes that the PL Act should be amended in such a way that the court can, when needed, request firms to present evidence related to the defect and the causality. If the firms do not reveal sufficient evidence, then the court can decide that the firm has the burden of proof for the nonexistence of the defect and causality. This seems to be a persuasive argument provided that the revelation process does not turn into an expensive discovery process as is common in the United States. Again, the principle is that people who have closer access to evidence should bear the burden of proof.

On the other side of the Pacific, attempts are being made in the United States to make PL laws for producers less stringent. The House of Representatives and the Senate, both of which are now under Republican majority, passed bills that would restrict the amount of product liability awards. The House bill intends to restrict punitive damages in all civil suits to \$250,000 or three times the plaintiff's economic losses in all civil suits, to allow manufacturers of products to use the defense of having received Food and Drug Administration (FDA) approval, and to shift the court fees to the party who loses the case. The Senate bill is more moderate and its main emphasis is to limit the punitive damages in product liability suits.

Lawyers and consumer advocates like Ralph Nader strongly oppose these bills. And, the President is expected to veto

any strong measure of limiting the tort liability.

Nevertheless, this move is a move, though very slight, of the American legal system toward a less expensive system of conflict resolution.<sup>1</sup> This is an interesting contrast to the case of Japan where people are moving very slowly toward more protection of consumers' rights.

### **3. Actors on the Scene of Product Liability**

Let us begin with a description of the characteristics of the main actors who interact with respect to the occurrence or the possible occurrence of defective products in Japan.

#### **3.1. Consumers**

In any society, consumer sovereignty is more myth than reality. Japan's consumers either willingly, reluctantly, or out of ignorance, to endure the extremely high price of rice and other agricultural commodities. Trade conflicts surrounding Japan could have been mitigated if Japan's consumers fully understood the merit of imports and expressed preferences for less expensive and more varied consumption

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<sup>1</sup>It is hard to obtain quantitative data in this field. People do not collect legal statistics as extensively as they do National Income Statistics. Business Week (September 26, 1994) reports that the lawyers gave \$20 million to candidates in California, Texas, and Alabama alone. This may help to explain the success of lawyers who have repeatedly blocked moves to limit product liability laws.

bundles.<sup>2</sup>

The influence of consumer organizations is modest, at best, and occasionally in the wrong direction. A consumer organization once petitioned the government not to relax the import ban of rice. These organizations consist mostly of women. The central organization, "Shufuren," means the housewife union, and it is often symbolized by a "rice scoop."<sup>3</sup>

With respect to product liability and defective products, however, these organizations played an important role. Safety of the household is their utmost priority. Their objective is to punish morally the producers of defective products. They pay less attention to the balance among the amount of supply, the price of goods, and the incidence of accidents with respect to a household good.

Scholars' concerns about consumers welfare is insufficient in Japan (for an exception, see Ito (1992)). Many treatises of anti-trust law, industrial law, and even intellectual property right law start with the assertion that

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<sup>2</sup>It is hard to find a "pure consumer" household because a household cannot consume unless it produces something. In the case of Japan's consumers, many of them have agricultural (or fishery) origins to which they return each summer and new year for their ancestral worship (Hamada and Nakajo, 1986).

<sup>3</sup>At an OECD meeting on consumer issues I attended in the 1980s, I remember that a representative of an American consumer organization asked a Japanese representative why Japanese consumer unions do not work hard to liberalize the import of rice and beef. It was as impressive as the fact that European delegates did not refer to the existence of agricultural subsidies.

these laws are for the benefit of industries, and do not explicitly mention the benefit of consumers.

Recent data on the consciousness of consumers about the new PL Act are contained in an interview survey conducted by the Prime Minister's Office (Sorifu, 1994). Half a year after the enactment of the PL Act, that is, in December 1994, 32.4% of those interviewed knew about the PL Act, of these 12.0% knew the objective of the new Act. Sixty-five percent of the interviewed did not know about the PL Act. To the question whether they were interested in the PL Act, 56.4% answered "yes" and 41.5% answered "no" or "not so much."

The most interesting finding in this survey is the question of how consumers' behavior will change because of the act. The answers chosen (multiple choice allowed) among alternatives were:

- (i) Choose the product paying more attention to safety in addition to price and quality: 29%,
- (ii) Use products more carefully and safely, for example, by reading the warnings on the products and the legends for use: 27.3%,
- (iii) When damaged by the accidents in products, bring forth complaints more actively: 25.7%,

and

- (iv) Keep the product when damaged by accidents in order to investigate the cause: 19.7%.

Answers (i) and (ii) were more common among women. Answer (iii) was more common among the younger generation in the thirty-year old age bracket, which I found most interesting. In sum, 61.1% of individuals thought that consumer behavior would change and 33.7% thought that it would not. The latter answer was found more frequently among men.

This lukewarm attitude -- probably the more aggressive attitudes are found among the younger generations with respect to complaints -- is symbolically presented by the lack of new suits in product liability. The Nikkei Newspaper reported on December 26, 1995, that a restaurant owner brought a court action against a producer of a paper container for tea. The container allegedly hurt his thumb when it was opened. The plaintiff's demand was the compensation of 910 thousand yen. This is probably the only court action after the new PL Act became that effective has been reported.

In short, consumers are usually friendly rather than hostile with producers and government institutions. They are often uninformed or misinformed. They seldom bring a case into court. The new PL Act has hardly changed this situation and will change it only very slowly.

### 3.2. Producers

The Japanese economy is characterized by the firm-dominated economy, or Kaisha-based economy. Under the lifetime employment system, which may be eroding only

extremely slowly in the face of continuing recession and the different attitude of younger generations, the firm is the most important entity in an employee's life, much more important than personal and family life. In fact, a firm is a quasi-family unit, where entertainment, excursions, parties, and kinds of (social) security care take place. The individual family life is often subordinated to the objective of the company. In fact, Kaisha (company) has a family structure by itself. In a sense, individual families belong to this big family, Kaisha.

The strong tradition of Zaibatsu (family conglomerate, financial clique) or Keiretsu (firm group) maintains this organizational feature of Japan's production sectors. During the process of enactment of the PL Act, this strong tradition worked effectively to postpone the legislation despite pressures from consumers, lawyers, insurance companies and parts of the government.<sup>4</sup> The international situation such as the initiation of the EC directive for product liability and the fear that Japan would be left behind made firms agree with the enactment of the PL Act.

Large businesses were now ready to cope with the more organized system of quasi strict liability. They had started

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<sup>4</sup>It is generally believed that MITI (Ministry of International Trade and Industry) is the proponent of industrial interests and that the EPA (Economic Planning Agency) is the proponent of consumers. This kind of characterization is often too simplistic. Even within each ministry some sections support one side and some support the other side.

preparing for the new law even before it was legislated. Firms have made strong efforts to deal with complaints on their products. They hope that many complaints will be handled by consultations, mutual negotiations, and settlements rather than expensive legal processes. They can make use of product liability insurance. The defense of development risks will surely help the position of large firms that depend on modern technology.

Corporations are eager to set up facilities of Alternative Dispute Resolution (ADR). Home Electric Products PL Center, Automobile Product Liability Consulting Center, and Residential Construction Parts PL Center are examples of numerous organizations of this kind (Hayashida, 1995). In the corporate culture where suits are not welcomed, firms find it more convenient and comfortable to resolve conflicts through negotiations with claimants. Firms hope that the ADR system will work to seat claimants at the negotiating table rather than lead them to courts. Consumers can benefit from the speed of settlements. Lawyers in Japan, however, criticize these facilities because the process is not open, the discovery of evidence is imperfect, and precedents do not naturally exist.

For small and medium companies (SMCs), say companies with fewer than 1000 employees, are in general more seriously affected by the PL Act. The defense of development risks is of limited value because SMCs do not necessarily use the



technology at the frontier of knowledge. Moreover, the burden of PL insurance can be heavy. Recently, insurance companies developed group insurance for SMCs. Companies join as a group to a pool for insurance whose payments to the insured may be limited by a certain amount.

In the case of restaurants, for example, The Japan Food Hygiene Cooperative (Nihon Shokuhin Eisei Kyokai) pools premiums and makes contracts with the insurance companies. Thus restaurants that have to suspend business will be able to receive partial compensation. It is usually less expensive to be insured through the cooperative. Also insurance companies help in negotiations with consumers. In fiscal year (FY) 1993, about 70% of restaurants joined the cooperative (Hayashida, 1995).

Finally, under the Japanese PL Act, not only a natural person but also an incorporated person (a firm) can claim compensation for the damage. This adds to the concerns of parts producers in that they may be sued by firms that buy their products.

### 3.3. Insurance Companies

In Japan, liability insurance was first available in 1957 (Hayashida, 1995). In FY 1992, the net insurance premium for the liability insurance of all the insurance companies in Japan amounted to 228 billion yen which is about 3.7% of the total net premium for all kinds of insurance. In FY 1993, the

net insurance premium for the liability insurance was 232 billion yen and about 3.6% of the total net premium for all kinds of insurance. In FY 1994, the net insurance premium for the liability insurance of all the insurance companies in Japan was 243 billion yen and again about 3.6% of the total net premium for all kinds of insurance. Liability insurance does not necessarily cover all the insurance contracts related to product liability, nor do the figures in these years reflect the effect of the new PL law.<sup>5</sup> However, these figures indicate that liability insurance has been increasing steadily although the amount of PL-related insurance in Japan has been relatively unimportant. A liability crisis is far from being a reality in Japan.

The 228 billion yen in liability insurance premiums in 1992 was about 0.04% of that year's GNP. It is difficult to sort out the premium corresponding to liability from the total causality insurance premium for the United States. According to one calculation by the EPA, the U.S. spent \$16.3 billion on liability insurance in 1989, which is 7.8% of all the premiums received by causality and fire insurance companies. This was 0.31% of the \$5.25 trillion U.S. GNP (EPA, 1993).

Insurance companies in Japan also play an important role in the propagation of knowledge about product liability. Yasuda Research Institute (1989) and Tokyo Kaijo Research

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<sup>5</sup>One may argue that the steady increase implies that firms were preparing for the forthcoming legislation.

Institute (1994) are typical examples of such activities. More public consciousness will mean more business for them as well.

### 3.4. Lawyers

There is strong contrast in the number of lawyers in Japan and the United States. In 1993 there were 84,000 lawyers in the United States, while in 1994 there were only 18,400 lawyers in Japan, or roughly one twentieth. Even if we adjust for the size of populations, in the United States one lawyer serves 307 people and in Japan one lawyer serves 6,768 people.<sup>6</sup>

Of course, as Kato (1987) emphasizes, we have to compare the legal, social, and economic functions of lawyers rather than their mere numbers. For example, there is a large number of law undergraduates in Japan who do not enter the legal profession through the bar examination. Most of them are hired by firms as general employees or become public servants. A substantial number of these non-lawyers in Japan engage in legal activities that correspond to the activities of in-house lawyers in U.S. firms such as legal consulting and advisory activities.

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<sup>6</sup>The corresponding figures of people per lawyer for European countries are larger than the United States -- 684, 964, and 1731 people respectively for the United Kingdom, Germany and France [Kubori, Hidaeki: *Funso Shori no Infura, Shiho Kakuju Mattanashi* (Fortify the Legal System for Conflict Resolution), Nikkei Business, January 1, 1996].

Even though the number of lawyers is large in the U.S., the number of litigation lawyers is not so numerous. Around 1985 the number of litigation lawyers was about 49,000. In Japan there were 18,000 lawyers, but most of them, except those who were judges or prosecutors, could work as litigation lawyers. Adjusting again for size of population, the density of litigation lawyers was higher in the United States but not very different (7 to 5) between the two countries (Kato, 1987).

The total number of court decisions in Japan on product liability cases during the postwar period is still extremely small, between 150 and 160. In the United States, 13,188 cases in FY 1991 and 13,119 cases in FY 1992 were brought to court. This takes into account only those cases where the federal courts were involved.<sup>7</sup>

Why is the number of law suits so small in Japan? The traditional explanation by Kawashima (1968) and others is that the Japanese do not regard legal actions to the court as socially desirable because the Japanese have a long tradition of respecting "harmony" among people. The first Constitution of Japan, established in the 7th century, starts with the phrase "Wa (harmony) is the most important."

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<sup>7</sup>According to the Quayle Committee's Report, which has the number of cases not only in the federal courts but in the state courts as well, in 1989 about 18 million cases existed in product liability, and, during that year, 250 thousand cases were accepted by the court.

This historical or cultural explanation has been challenged recently by alternative explanations. One explanation emphasizes the supply side of legal services. The supply of lawyers in Japan is limited by the national bar examination that is extremely competitive with a success rate of slightly less than two percent. Though somewhat relaxed in recent years, each year fewer than a thousand people are admitted as a pool for lawyers, prosecutors, and judges.

One may suspect that some monopoly rent due to the restriction of the supply of lawyers emerges on the side of lawyers. The fact that American lawyers are eager to enter into Japan's legal services market, in spite of the opposition of Japan's Lawyers' Association, can be interpreted as the evidence of sufficient rent.

The comparison of earnings of lawyers between Japan and the United States, however, does not completely support this supply limitation theory. This theory implies differences in the earnings of lawyers. However, earnings of lawyers are not conspicuously different. According to Kato (1987), the average or median earnings of Japanese lawyers in the early 1980s were likely to be lower those of U.S. lawyers. Thus, it is not merely the shortage of lawyers, but some factors on the demand side, that make the number of suits small.

One deterrent to litigation in Japan is the existence of high court fees and the absence of contingent fees for lawyers. According to Hayashida (1995), the court fee for a

plaintiff in the U.S. is constant regardless of the amount of the claim and is around \$100, which an American attorney is willing to expend because of contingent fee system. In Japan, on the other hand, the amount of the fee is roughly proportional to the claim. For example, a claimant for 100 million yen (= around \$1 million) is required to pay 400 thousand yen (= \$4,000). (Kobayashi, 1995, has similar figures.) Moreover, Japanese attorneys have a standard fee schedule and do not rely on a contingent fee schedule. Hayashida (1995) mentions two other factors as deterrents to court actions in Japan: a complicated document is required to bring a case to court and the gloomy, dark atmosphere of court buildings gives a negative image to people.

Another deterrent to litigation is the fact that court actions in the Japanese system can take a very long time; five years, on average, before judges' decisions are made (Haley, 1991). Indeed, lawyers often do not encourage clients to bring issues to court; in fact they sometimes even discourage people from doing so, in great contrast to what "ambulance chasers" do. Thus, if the demand for legal service is not low because of Japan's culture, social organization, or the nature of its people, then it may actually be a result of actions taken by lawyers.<sup>8</sup>

Even though the number of cases of product liability is

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<sup>8</sup>For the effects of the variability in award and the absence of the jury system, see Hamada (1995).

extremely small in Japan, the contrary is experienced in some serious cases of defective products. The public became seriously concerned with safety, particularly in the 1960s, when protests against polluting firms became vehement. There were many celebrated cases of product liability, such as the cases of Kanemi Oil, arsenic milk, SMON (subacute myelo-optic neuropathy), Chloroquine, and so forth. In the case of Kanemi Oil, a dangerous chemical normally used as a heat catalyst was mistakenly mixed with cooking oil. SMON was a disease triggered by an otherwise very effective drug for diarrhea and amebic dysentery, Cinoform. Chloroquine was a drug designed to fight Malaria, which caused many serious side effects and health hazards.

Recently, the case of alleged fire from a Matsushita television attracted attention. The Osaka District Court decided that the fact that a TV caught fire would indicate the existence of negligence on the part of the producer. The Ministry of Welfare has been under fire because of the claim by plaintiffs who are victims of infected processed blood that the Ministry must have known about the danger of HIV infection from the blood processed without heated sterilization when it approved its import. Recently the Ministry acknowledged that it had known about the possibility. The case of the nutrition product, L-Tryptophan, in the foreign market will be discussed later.

Let us consider some quantitative aspects of product hazards in Japan. The National Life Center and its prefectural branches, Consumer Life Centers, indicate that they receive complaints regarding defective products that amount in value to 1.585 million yen. Japanese consumers are quite reluctant to complain to an official center. They estimate accordingly, that only 2 percent of them complain. There are also other institutions that accept complaints, but suppose, accordingly, that 60% of those who do complain go to the Consumer Life Centers. A report of the Economic Planning Agency (EPA) on product liability calculates that  $1.585 / (0.02 \times 0.6) = 1.585 / (0.012)$  million yen = ¥132 billion was involved in the damages caused by defective products and was hidden from statistics. Based on the exchange rate at that time, about \$1.1 billion were at stake.

The cost of food poisoning, which includes the causality from dangerous blow fish (fugu), was calculated as being about ¥4 billion. Damages from fire were ¥1.4 billion and those from defective automobiles were estimated to be ¥11.4 billion. These numbers total about ¥150 billion, or, at an exchange conversion rate of 120 yen per dollar, approximately \$1.3 billion in damages. 150 billion yen is about 0.03% of GDP.

In the Kanemi Oil case, the maximum awards to plaintiffs was 6.3 billion yen, but these awards were given to tens of plaintiffs. In the United States, the total compensation for the asbestos-related cases allegedly amounted to \$20.9



billion.

The extent of payments to lawyers is usually considered to be 1/3 to 35% of the award by the court. In Japan it is certainly less, close to 8 to 10% of the awards. Accordingly, the flow of income to the legal profession associated with PL disputes in Japan has been much smaller than that to U.S. lawyers.

In summary, the ratio of the per capita number of lawyers is one to twenty between Japan and the United States, the number of cases brought to court is one to more than one hundred, and the per capita GNP amount of money involved through the insurance system for product liability is at least one to ten in terms of insurance premia.<sup>9</sup>

The costs incurred by legal processes in both countries are hard to access precisely. So are the costs for consumers who cannot recover their damages. We need further empirical research to find the basic quantitative evidence to decide which of the two systems is more tolerable even though both are the second best.

Legal services are utilized to decide how to cut the pie, but by themselves they do not enlarge the pie. One may deduce

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<sup>9</sup>Estimates vary. Business Week (December 4, 1995) cites a study by Tillinghast-Towers Perrin which indicates that the legal and administrative, jury and settlement costs related to tort amount to 2.2% of the U.S. GDP, while in Japan this cost is about 0.5%. The U.S. figure hit a peak in 1985 at 2.5%, and accordingly, it is decreasing, but is still higher than other industrial countries. (The ratio is 1.3 in Italy and Germany, 0.8% in the UK, France and Canada.)

conventionally that a large flow of resources into legal activities is not welcomed. For some people, of course, it has a value of its own to appeal to a court and to be awarded proper compensation. The American people, however, seem to spend too much on dispute resolution with respect to product liability.

### 3.5. Government

The Division of Human Life of the Economic Planning Agency was instrumental in proposing, advocating, and drafting the new PL Act. It had organized a large number of meetings and published the proceedings of these meetings since the idea of legislating a PL law was initiated. Other government offices like the Industrial Structure Section of the Ministry of the International Trade and Industry also participated in the process.

The Japanese government does not encourage court actions, but does encourage consumers to be well informed about the nature and the possible danger of a product. The National Life Center was established to collect information of dangerous products, to test the safety of products, and to train specialists on consumer affairs. It is associated with more than 260 Consumption Life Centers. In its bulletin dated July, 1994, the Center expressed its strong intention to help consumers by providing counseling to them, publicizing information, and assisting lawyers who bring suits to court.

Hayashida (1995) describes this bulletin as "frightening" to manufacturers.

Also, many ministries have opened offices for handling consumers' claims: for example, the Ministry of Welfare for medication, the MITI for manufactured products, and the Ministry of Agriculture for food. Municipal governments are following the lead of the national government.

#### 4. Economic Analysis

Let us turn to the economic analysis of product liability. (For a comprehensive synthesis, see Schwartz 1988.) Start from the simplest case where a product, say bottled beer, may cause damage without a safety measure (Demsetz (1972), Hamada (1976), and, in the context of labor accident compensation, Williamson et al. (1967)). If the producer spends some additional money on the product, the damage can be prevented. This assumption can be relaxed without difficulty. We shall assume that the expected value of the damage does not depend on the level of consumers' care.

Suppose the consumers consist of individuals and their marginal utility of income can be regarded as constant. Accordingly, they are risk neutral, but we are allowed to use the partial equilibrium framework.

In Figure 1 let  $DD$  be the demand curve for a product on the condition that it is perfectly safe, and let  $SS$  be the supply curve of the product without expenditure on the safety

measure. Under the validity of the partial equilibrium analysis, the social gain is expressed by the social surplus, that is, the sum of the consumers' and producers' surplus. The maximum social surplus in the absence of product hazards is realized as the area of the triangle  $DPS$  in the competitive market,  $OP'$  being the competitive price.

Now let us introduce the danger from the product. If the expected value of the damage of explosion is  $DD^*$ , the demand curve for the unsafe product becomes  $D^*D^*$  if the consumers know exactly the probability of damage. Also let  $SS^*$  be the cost of the safety measure for the product, so that  $S^*S^*$  is the supply curve of the safe product inclusive of the expenditure on the safety measure.

If the producers are liable, they will compare the expected value of the compensation with the cost for implementing the safety measure. Figure 1 is drawn in such a way that  $SS^*$  is smaller than  $DD^*$ . Accordingly, the economic calculation of the producers lets them implement the safety measure in this case because the producers' surplus is larger with the safety measure. Thus equilibrium  $R$  is realized,  $OR'$  being the price.

If the consumers are liable, as long as the consumers are perfectly aware of the probability and the magnitude of the damage,  $DD$  shifts to  $D^*D^*$ . Accordingly, it is more profitable for the producers to produce the safe product because the producers' surplus  $S^*RR'$  with the safe product, is larger than

$SQQ'$  with the unsafe product. Thus  $R$  is realized in this case as well. Similarly, if  $SS^*$  were larger than  $DD^*$ , the equilibrium corresponding to  $Q$  in Figure 1 would be chosen regardless of which party would be liable for the damage.

Thus, regardless of the liability rule, and even in the absence of explicit negotiations, the competitive market realizes the maximization of the total surplus, provided that the victims are limited to the purchasers of the product, and that the consumers are fully aware of the expected cost of the danger. The direct or indirect price relationship between producers and consumers enables them to engage in implicit negotiations by imputing the burden of risk through the price. Moreover, the distribution between consumers' surplus and producers' surplus remains the same as long as the equilibrium is given by  $R$ . Thus the liability rule affects neither resource allocation nor income distribution. This invariability of income distribution with respect to the liability rule is contrasted with the case of tort in general, where the Coase Theorem gives the invariability of resource allocation but not that of income distribution.

Neither the resource allocation nor the distribution between the consumers' and the producers' surplus is affected by the liability rule, provided that the consumers are fully aware of the probability and magnitude of the damage due to the product hazard, and that the victims are limited to the purchasers of the product. This is the starting point of our

analysis.

In the real world, consumers are not expected to know every possibility for a defect of a product. If consumers are liable, or if they cannot recover for damages caused by a product, then producers are induced to produce an unsafe product. Consumers who had the misconception that the product is safe will buy the product and be harmed by its defect.

Figure 2 depicts the extreme case in which all the consumers are ignorant about the possible defect of the product. If the expected value of the damage is equal to  $DD^*$ , the market price will be determined at  $P$  and consumers will suffer the damage equal to the area of the shaded region. In the presence of misperception, the above neutrality theorem does not hold, and consumers lose the amount equal to the shaded area of  $DPVD^*$ . Strict liability improves this situation, because all the burden of consumers is shifted to producers. Producers behave as if they were facing demand curve  $D^*D^*$  of consumers, and accordingly choose  $R$  as the equilibrium output.

To make the situation more realistic, suppose some of the consumers discern the possible danger, and the rest of them do not. Then the effective demand curve for the consumers as a whole can be drawn as curve  $DXD^{**}$  in Figure 3. (Here it is assumed that half the consumers are ignorant. The demand curve is constructed by adding the demand curve starting at  $D$ , for the half of the population which recognizes, to the demand

curve starting at  $D^*$ , for the other half of the population which does not.) Here a liability rule that does not make producers liable can lead to misallocation of resources. In this example where  $SS^*$  is larger than  $DD^*$ , producers do not choose to adopt the safety device.

Thus, in the presence of misperception and in the absence of legal costs, the producer's liability is better for resource allocation. If one introduces the aspects of legal costs, settlement costs, and attorneys' costs, the situation will again become more complicated.

Let us return to the world in which all of the consumers misconceive a product to be perfectly safe in spite of the danger. Because of the existence of misconception, the system of producer's liability is chosen. Consumers are surprised by the accident and we assume that they bring the case to court. As mentioned above, in the United States consumers pay only a nominal part of legal costs due to low court fees and the existence of the contingent fee system. Let us assume that producers pay all the legal costs, and that all consumers actually sue the producer after the accident. Then, as in Figure 4, the amount of damage  $DD^*$  will be shifted to producers as  $ST_1$ . The legal cost that is imposed on producers is expressed as the distance  $T_1T_2$ . If the prevention cost on the part of producers is small and like  $S_1^*S_1^*$ , then producers are motivated to adopt the safety device and the market will determine the price of the product at  $R_1$ . There will be no

need for legal processes and the magnitude of legal costs does not matter to resource allocation.

If the cost of adopting a safety measure is as expensive as  $OS_2^*$ , however, legal cost matters much in deciding whether to adopt safety measures. If the cost of prevention curve  $S_2^*S_2^*$  curve goes above  $T_2T_2$  curve, then producers will give up improving safety. Therefore accidents occur, and the market equilibrium is attained at  $Q$ . The economy will "lose" the shaded area,  $T_2QLT_1$ , as the legal cost of negotiations, settlements and trials.<sup>10</sup> If  $S_2S_2$  lies between  $T_1T_1$  and  $T_2T_2$ , one can easily see that the prevention measure will be adopted but that is not socially optimal. Producers overprotect because of the burdens of legal cost on them.

Thus the following dilemma emerges. In spite of the necessity for producers to have the liability when consumers misconception occurs, a large legal cost has the following production implication. It makes producers spend more than necessary for prevention, and reduce or suspend production or services more than the desirable resource allocation requires. In other words, the resources put into conflict resolution are, in a sense, wasted.

Firms rely on insurance to protect themselves from paying a large amount of the jury award that implicitly contains the legal cost of a PL case. Although insurance is a necessary

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<sup>10</sup>If the legal profession creates the services of providing the feeling of fulfillment of clients' intentions or fulfillment of justice, then this may not be a loss.



and useful device for pooling risks, it may create problems such as moral hazard and adverse selection. In particular, firms that have already paid insurance premiums may not spend on the safety improvements. In this case, the economic incentive described above will cease to work (moral hazard). Producers charge a high price for their product to cover their insurance premium, and that may harm the poor buyers rather than the rich buyers (Priest, 1987). Moreover, the firm may stop producing the product if the cost of insurance is too high.  $ST_2$  is too large to produce a good (service)! Casual evidence suggests that the insurance premium a Japanese medical practitioner pays is about one or two per cent of what an American doctor pays. Because of the high insurance premiums, doctors are said to avoid clinical practice in a field like obstetrics.

A large jury award certainly benefits the plaintiff of the case but, as a result, most consumers will lose by facing higher prices. The switching of the burden of court fees to plaintiffs who lose may reduce legal costs in the case of misconception. If consumers are fully aware of the damages and expected court fees that are needed to recover the damages, then those expected costs it will be reflected in the demand curve. Again the neutrality theorem along the line of the Coase will prevail. The court fee assigned to consumers will be reflected in a higher price of the commodity. If consumers are not fully aware of the possibility, then it will

help by reducing the expected costs to producers. The same applies to the maximum limit of award currently discussed in the U.S. Congress. It will certainly reduce the burden to producers and accordingly mitigate the dilemma mentioned above.

The jury is often said to determine the jury award such that the award net of attorney's fees should equal the amount of damages (Kobayashi, 1995; EPA, 1993). Then the expected cost that the defendant pays will include the attorney's fees as well. It can be shown, under the assumption of the free entry of lawyers, that the defendant will pay the sum of damage  $D$  and the capitalized value of  $I/\pi$  where  $I$  is the attorney's fixed cost for pursuing the suit, and  $\pi$  is the probability of winning the award.<sup>11</sup>

The Japanese system tends to encourage production and new development of goods. But legal incentives to stop defective products are not sufficient. Many consumers have been, and continue to be, compelled to endure the consequences of defective products without being compensated either because of

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<sup>11</sup>Suppose the jury award  $X$  is determined by

$$(*) \quad D = (1-\rho)X.$$

Under the free entry with no profit for lawyers

$$(**) \quad \pi\rho X - I = 0$$

where  $\rho$  is the rate of the contingent fee.

From (\*) and (\*\*), one obtains

$$X = D + I/\pi.$$

the lack of information or because of the lack of opportunities to protest -- in particular, to appeal to a court.

Legal costs certainly change the resource allocation and income distribution. Honoring the waiver clause on the product by which consumers' give up claims will make the natural selection possible. In other words, the device in which producers put waiver clauses of the compensation and sell cheap products will work as a means of attaining Coase type of solutions.

One direction that Japan's government emphasizes is to make consumers aware both of the possibility of defective products and of possible ways of recovering damages including, but not necessarily confined to, court actions. Reducing the gap between  $D^*D^*$  and the uninformed demand curve  $DXD^{**}$ , is certainly a promising direction.

One puzzle is the phenomenon that Japanese firms are committed to safe and high-quality products in spite of Japan's less strict product liability law. Probably one reason for this is the existence of trade with more strict PL countries, as will be explained in the last section. Another reason is peer pressure. Defective products create social issues; reputation is often more important than economic calculation.

There must be a combination of incentive schemes that guarantees the best outcome. Probably the best system lies

between the Japanese and the American system. Easier opportunities for the consumers to protest and allowance of easier opportunities for attorneys to pursue the PL litigation than in Japan will improve the incentives of producers to improve safety and prevent consumers from being to accept the damage or firms' conditions of settlements. But probably the best system will not be the adoption of punitive damages nor that of the jury system. The American system seems to be a little biased toward the excessive use of legal procedures and the excessive incentives for producers to prepare for the damage.

## **5. Concluding Remarks**

If we compare any two or more systems, we seldom find that one system dominates others. Most of the systems have advantages as well as disadvantages. We have found that the Japanese legal system tends to economize legal and administration costs related to defective products even at the cost of uncompensated consumers, and that the U.S. tort system tends to compensate consumers at the cost of large legal and administration costs which result in higher commodity prices.

Both systems are now slightly converging with each other. The new PL Act will make Japan's consumers more protected, even though the evidence is yet to come. The bills that passed the U.S. Congress, if the essential content of them is really implemented, will make American product liability less

expensive. These laws appear to be looking in the same direction, but from very different starting points.

There are two kinds of important costs that usually move in mutually different directions in these reforms of product liability. The first is the cost of consumers' loss due to their ignorance or misconception of dangers of a product. For those who attach importance to the fact that a victim has the choice to appeal to due process of law and to be judged fairly regardless of the decision, this first cost is even more important. The second is the cost involved in the legal process such as discoveries, settlements, and trials.

Japan's new PL Act aims to reduce the first kind of cost, while U.S. moves to limit awards for product liability claims show the way to moderate the second kind of cost. Indeed, Japan's direction is a structural reform. It does not necessarily mean deregulation because a firm is under a stricter rule of conduct with respect to defective products. However, it should be noted that the attempt to reduce the economic cost of accidents by the behavior of private agents such as consumers and producers under a given rule of product liability is certainly a market solution to product hazard.

Then, how far should Japan's legal system approach the U.S. type of system. Consumers should be protected as much as reasonably possible. At the same time, however, the deadweight loss of legal or settlement costs should not be increased without a proper limit. Unless the present system

does not create many consumer victims out of ignorance, I am inclined to think that Japan's system does not need to be strengthened to approach genuine product liability. But this is surely a matter for serious debate.

No legal system stands alone. The system functions only if it is supported by economic and social systems on which the legal system operates. Therefore, it would be hard to create an average of the American and Japanese systems. The direct grafting of the stem of one system into the other is difficult. A more practical way is to adapt a part of the existing system by the wisdom we obtain from the other system. In that sense, the movements in the two countries are welcome.

Even without grafting or harmonizing the systems, trade and foreign investments make the handling of defective products quite different from that of the closed economy. Presumably, one would say, Japanese firms would have advantages in their exports because they are not induced to spend as much on the prevention of accidents or on legal costs. American firms have to spend much on legal costs. Suppose these statements are true. Even then, Japanese firms have to meet the high American standards and the court costs in the United States under free trade. This will give stronger incentives for Japanese firms to improve the safety of their products. Similarly, American firms will face a little less stringent requirement. In sum, international trade will mitigate the systemic differences in product

liability.

This factor may explain the puzzle that Japanese products, though they are under less rigorous product liability, seem to keep high quality. The possibility of being tested in foreign markets where the PL law is better organized may be one of the reasons Japanese products have a high safety standard. This is a good explanation, but it may not be enough. One other important reason would be the peer pressure in the industrial circle. In the Japanese tradition, the firm's name is like the authentic family name. Selling a defective product with your brand is like disgracing your brand name, or your family name. Is it my prejudice to say that this kind of business psychology helps firms to continue to produce safe products in Japan?

The strength and weakness of the American and Japanese systems also have implications for bilateral and multilateral international negotiations. In the talks concerning non-trade barriers between countries, or those concerning the new international rule, the negotiation is centered around legislation or an amendment of a law in the other country or the international law. The treatment of the subordinate right of copyright is one example.

The fact that negotiators on the U.S. side are extremely capable attorneys gives me some concern. They seem to prefer, partly due to the instinct of attorneys, more and more litigious methods of conflict resolution. I hope that they do

not always insist on and succeed in imposing a highly litigious system that has developed in the United States. For, if they do, they might as well export the highly expensive cost of the American system of conflict resolution, which probably outweighs its benefit.



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## APPENDIX I

### The Product Liability Law (Law No. 85, 1994) (tentative translation)

#### Article 1 [Purpose]

The purpose of this law is to relieve the injured person by setting forth liability of the manufacturer, etc. for damages when the injury on a life, a body, or property is caused by a defect in the product, and thereby to contribute to the stabilization and improvement of the people's life and to the sound development of the national economy.

#### Article 2 [Definitions]

- (1) As used in this Law, the term "product" means movable property manufactured or processed.
- (2) As used in this Law, the term "defect" means lack of safety that the product ordinarily should provide, taking into account the nature of the product, the ordinarily foreseeable manner of use of the product, the time when the manufacturer, etc. delivered the product, and other circumstances concerning the product.
- (3) As used in this Law, the term "manufacturer, etc." means any one of the following:
  1. any person who manufactured, processed, or imported the product as business (hereinafter called just "manufacturer");
  2. any person who, by putting his name, trade name, trade mark or other feature (hereinafter called "representation of name, etc.") on the product presents himself as its manufacturer, or any person who puts the representation of name, etc. on the product in a manner mistakable for the manufacturer;
  3. apart from any person mentioned in the preceding subsections, any person who, by putting the representation of name, etc. on the product, may be recognized as its manufacturer-in-fact, in the light of a manner concerning manufacturing, processing, importation or sales, and other circumstances.

### Article 3 [Product Liability]

The manufacturer, etc. shall be liable for damages caused by the injury, when he injured someone's life, body or property by the defect in his delivered product which he manufactured, processed, imported or put the representation of name, etc. as described in subsection 2 or 3 of section 3 of Article 2 on. However, the manufacturer, etc. is not liable when only the defective product itself is damaged.

### Article 4 [Exemptions]

In cases where Article 3 applies, the manufacturer, etc. shall not be liable as a result of Article 3 if he proves;

1. that the state of scientific or technical knowledge at the time when the manufacturer, etc. delivered the product was not such as to enable the existence of the defect in the product to be discovered; or
2. in the case where the product is used as a component or raw material of another product, that the defect is substantially attributable to compliance with the instruction concerning the specifications given by the manufacturer of the said another product, and that the manufacturer, etc. is not negligent on occurrence of the defect.

### Article 5 [Time Limitations]

- (1) The right for damages provided in Article 3 shall be extinguished by prescription if the injured person or his legal representative does not exercise such right within 3 years from the time when he becomes aware of the damage and the liable party for the damage. The same shall also apply upon the expiry of a period of 10 years from the time when the manufacturer, etc. delivered the product.
- (2) The period in the latter sentence of section 1 of this Article shall be calculated from the time when the damage arises, where such damage is caused by the substances which are harmful to human health when they remain or accumulate in the body, or where the symptoms for such damage appear after a certain latent period.

### Article 6 [Application of Civil Code]

In so far as this law does not provide otherwise, the liability of the manufacturer, etc. for damages caused by a

defect in the product shall be subject to the provisions of the Civil Code (Law No. 89, 1896).

#### Supplementary Provisions

1. Enforcement Date, etc.

This Law shall come into force the day after one year from the date of promulgation, and shall apply to the products delivered by the manufacturer, etc. after this Law comes into force.

2. Partial Amendment of the Law on Compensation for Nuclear Damage

The Law on Compensation for Nuclear Damage (Law No. 147, 1961) shall be partially amended as follows:

In section 3 of Article 4 of that Law, "and the Law relating to the Limitation of the Liability of shipowners (Law No. 94, 1975)" shall be amended as, "the Law relating to the Limitation of the Liability of shipowners (Law No. 94, 1975) and the Product Liability Law (Law No. 85, 1994)".

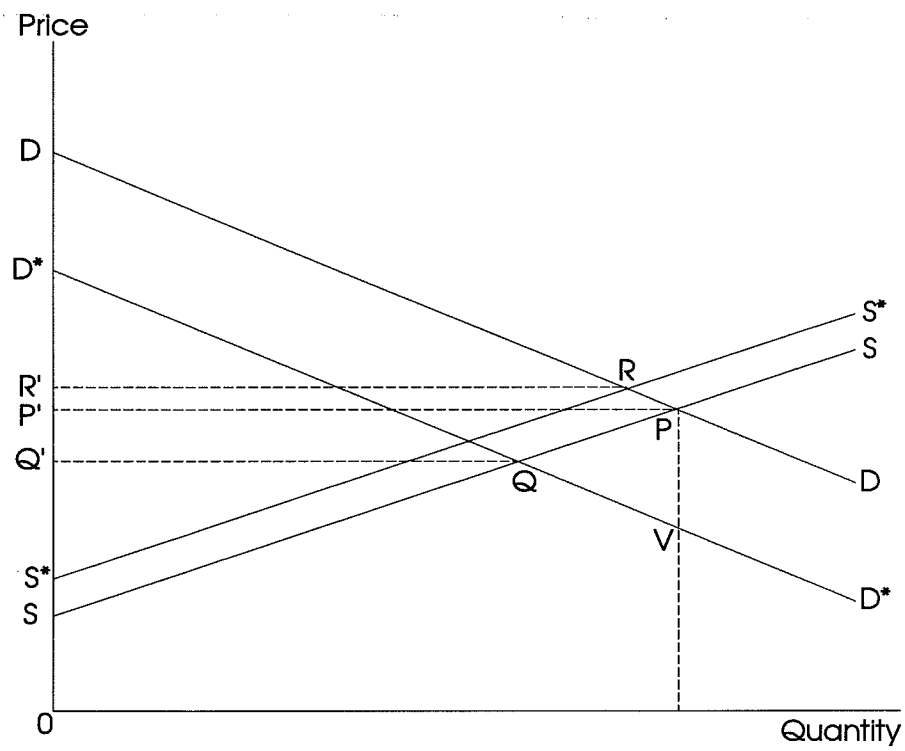


FIGURE 1

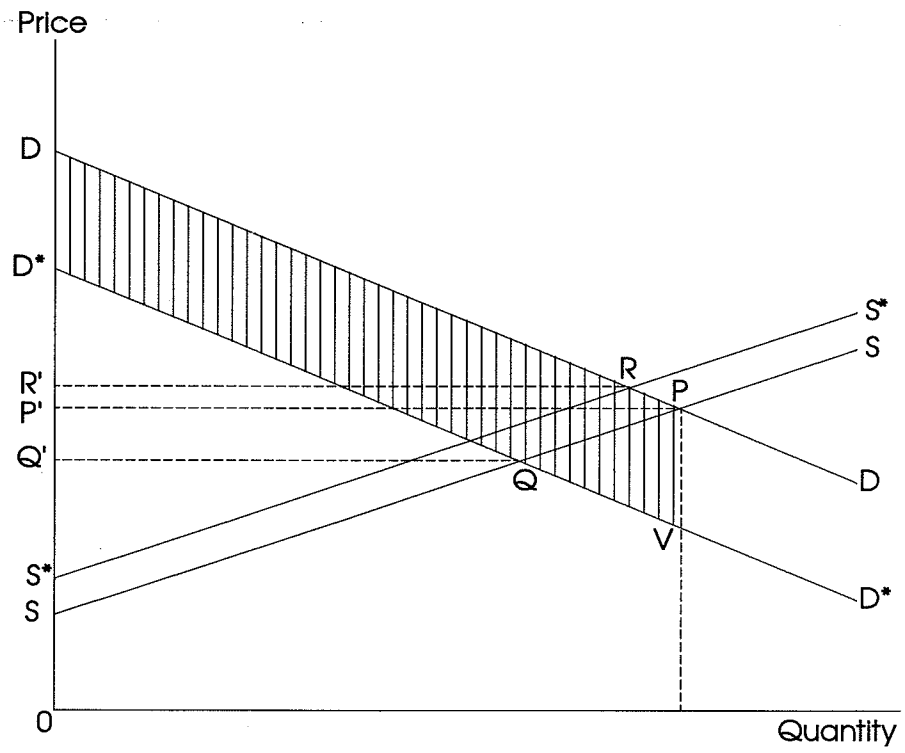


FIGURE 2

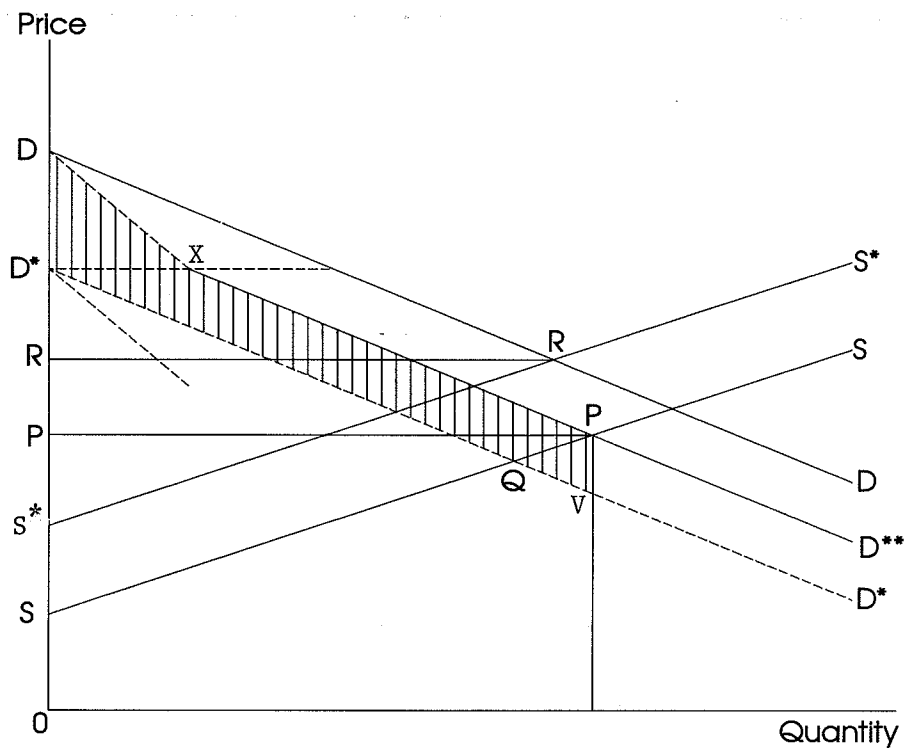


FIGURE 3



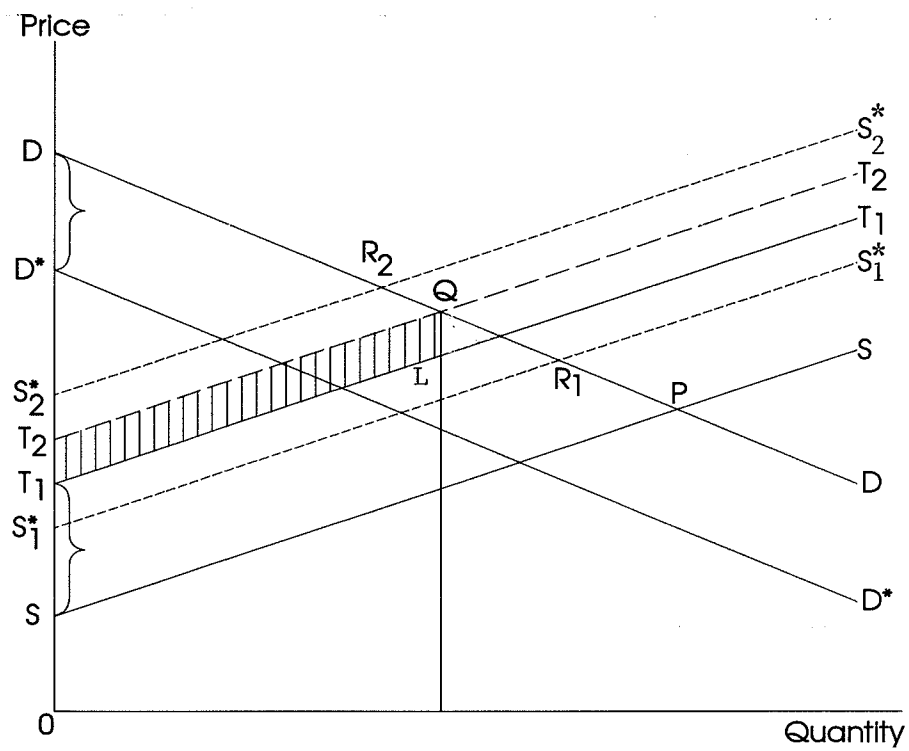


FIGURE 4